

Claims

1. A means for monitoring the assembly of threaded components comprising a station at which two threaded components are to be threadably interengaged, a heat sensor adapted to sense infra red radiation, the sensor located and positioned at the station to sense the temperature variations over the inter-engaged surfaces of the threaded coupling whilst the inter-engaged surfaces are being threadably engaged or disengaged, an output associated with the sensor which is adapted to display an indication of the variation of the temperatures of the inter-engaged surfaces of the coupling during assembly or disassembly of the components.
2. A means as claimed at claim 1 wherein the output comprises a display.
3. A means as claimed at claim 2 wherein the display comprises a pictorial representation of the coupling which indicates the temperatures of the inter-engaged surfaces of the coupling being monitored.
4. A means as claimed at claim 1, or 2 or 3 wherein the sensor comprises an infrared camera.
5. A means as claimed at claim 1, or 2 or 3 or 4 wherein a plurality of sensors are located at the station, said sensors being angularly displaced around the coupling during assembly or disassembly to scan the full outer surface of the coupling.
6. A means as claimed at claim 5 wherein the display comprises a single image which is representative of the full surface area of the coupling and which is a composite of the output of each of the sensors.
7. A method of monitoring the assembly of threaded components comprising sensing the variation in the temperatures of the inter-engaged surfaces of the threaded coupling whilst being threadably engaged or disengaged and

monitoring the temperatures of the inter-engaged surfaces of the coupling for the occurrence of zones which are the subject of an increased temperature when compared to the remainder of the threaded coupling.

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8. A method as claimed at claim 7 wherein the method comprises use of an infra-red camera as the sensing means and the display provides a coloured representation of the coupling where the change in colouring is representative of the temperatures of the coupling.
9. A method as claimed at claim 7 or 8 wherein a plurality of sensors are located at angularly disposed positions around the coupling.
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- 10.A method for monitoring the assembly of threaded components substantially as herein described.
- 11.A means for monitoring the assembly of threaded components substantially as herein described.